

REMARKS/ARGUMENTS

Claims Status

Claims 1 and 3-15 are pending. Claim 1 is currently amended for grammatical purposes and to improve readability, as well as to incorporate subject matter disclosed in the examples and paragraphs [0016], [0018] and [0019] of the specification. Claim 2 is canceled without prejudice. Claims 3 and 4 are withdrawn pursuant to a previous Restriction Requirement. Claims 5-15 are added. New claims 5-11 find support in [0016] of the specification. New claim 12 finds support in [0017] of the specification. New claim 13 finds support in [0006] of the specification. New claims 14 and 15 find support in [0017] of the specification. No new matter is believed to have been entered.

§112, 2nd paragraph, Rejection

Claims 1 and 2 are rejected as indefinite because “it is unclear as to whether or not applicants are claiming the modifier before or after irradiation.” Claim 1 has been amended to clarify that “30% by mass or more of irradiated modifier particles having an average particle size of 10 μm or less, said irradiation occurring via an ultrasonic wave of 40 W for 5 minutes.” Claim 2 has been canceled. Accordingly, Applicants request withdrawal of this rejection.

§102(b)/§103(a) Rejections

Claims 1 and 2 are rejected as anticipated by or, in the alternative, obvious in view of *Endo* (US 6,051,650) or *Hashiba* (JP 2003-026890). Claims 1 and 2 are also rejected as anticipated by or, in the alternative, obvious in view of *Fukui* (US 7,335,703). Applicants respectfully traverse these rejections.

The claimed invention relates to a resin modifier used to modify resins having an average particle size of 20 μm or more, said modifier being a graft copolymer incorporating acrylic rubber and having an average particle size of 600-900 nm (see claim 1).

In contrast to the claimed invention, *Endo* discloses a graft copolymer incorporating a butadiene rubber (see Examples 1-21 of Tables 2, 4 and 6), not an acrylic rubber as claimed. The graft copolymer of *Endo* uses a butadiene rubber which has a double bond; Applicants submit that the double bond results in inferior weather resistance. In contrast, the claimed invention uses an acrylic rubber that does not have a double bond and therefore Applicants submit that the lack of a double bond results in superior weather resistance. Accordingly, *Endo* does not anticipate the claimed invention because a butadiene-rubber-containing graft copolymer does not equate to an acrylic-rubber-containing graft copolymer. Similarly, *Endo* does not render obvious the claimed invention because a butadiene-rubber-containing graft copolymer having inferior weather resistance does not suggest an acrylic-rubber-containing graft copolymer having superior weather resistance. As such, Applicants request withdrawal of the §102(b)/§103(a) rejection over *Endo*.

Also in contrast to the claimed invention is the disclosure of *Hashiba*. The *Hashiba* reference discloses a graft copolymer comprising composite rubber having a weight average particle diameter of 0.1-0.3 μm (equivalent to 100-300 nm) (see Abstract). While the particle diameter of the graft copolymer is not expressly disclosed in *Hashiba*, Applicants submit that due to disclosed weight average particle diameter being 100-300 nm, one skilled in the art would recognize that the diameter of the graft copolymer would be no more than 400 nm. Accordingly, *Hashiba* does not anticipate the claimed invention because a graft copolymer having an average particle size of 400 nm or less does not equate to the claimed graft copolymer having an average particle size of 600-900 nm. Similarly, *Hashiba* does not render obvious the claimed invention because a ≤ 400 nm sized graft copolymer does not suggest a 600-900 nm sized graft copolymer, especially when the larger sized graft copolymer as claimed has improved dispersibility of secondary particles to primary particles

due to the larger size. As such, Applicants request withdrawal of the §102(b)/§103(a) rejection over *Hashiba*.

Lastly, similar to the *Endo* reference discussed above, *Fukui* discloses a graft copolymer comprising polyolefin (see Abstract), not an acrylic rubber as claimed. The graft copolymer of *Fukui* uses a polyolefin which Applicants submit results in a lack of impact resistance improvement when mixed with a resin. In contrast, the claimed invention uses an acrylic rubber that has rubber elasticity and therefore Applicants submit improves the impact resistance of a resin incorporating said rubber. Accordingly, *Fukui* does not anticipate the claimed invention because a polyolefin-containing graft copolymer does not equate to an acrylic-rubber-containing graft copolymer. Similarly, *Fukui* does not render obvious the claimed invention because a polyolefin-containing graft copolymer having a lack of impact resistance improvement does not suggest an acrylic-rubber-containing graft copolymer having improved impact resistance. As such, Applicants request withdrawal of the §102(b)/§103(a) rejection over *Fukui*.


Conclusion

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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